



Medical Studies

Use of needle-free injection systems to alleviate needle phobia and pain at injection.



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Abstract

Needle phobia affects at least 10% of the general population. Subcutaneous injections are used for many reasons, including immunizations, administration of medications such as insulin and heparin, and to provide local anesthesia, both for surgery and for intravenous cannulation. Whatever the reason for its application, the injection itself may cause discomfort and/or pain. In children, in patients with needle phobia, in those who require frequent intravenous cannulations, or in those who need daily medication, the pain at injection can reach unbearable intensity that could lead to refusal of medical care. Various approaches are employed to alleviate the pain caused by intravenous cannulation. These include the use of topical analgesia [i.e., EMLA, Ametop (tetracaine), Numby Stuff and ethylchloridespray], skin infiltration with lidocaine using 25-30-gauge needles and jet injectors. This article will review the complex topic of needle phobia and needle pain, and will summarize the currently available alternatives and the new developments intended to reduce the intensity of injection pain.

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